REMARKS

Reconsideration of the present application as amended is respectfully requested. No claims have been amended or canceled. Claims 1-14 are currently pending.

In the Office Action, the drawings stand objected to because "Figure 2A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated." Applicant has amended Figure 2A to include the label "Prior Art").

The abstract stands objected to because of the use of legal phraseology language and multiple paragraphs. The Examiner further suggests that Applicant remove the last line containing the phrase "Figure 2B should be published." Applicant has submitted a new abstract to replace the original abstract. Applicant respectfully submits support for the new abstract can be found at at least the abstract as originally filed. Applicant respectfully submits that the newly submitted abstract is in conformance with the requirements of the USPTO. Applicant has amended page 6, line 1 of the specification to insert a new paragraph. Applicant respectfully submits that support for the newly added paragraph can be found at at least page 23, lines 22-27 of the abstract as originally filed. Applicant respectfully submits that no new matter has been added by the amendments to the specification.

Claims 1, 2, 6, 7, 10 and 11 stand rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,430,743 to Marturano et al. ("Marturano"). Independent claim 1 is directed to a mobile station adapted to be used in a radio communications system. The mobile station includes the feature of "second detecting means adapted, when the quality of said received blocks of information bits is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means." Applicant respectfully submits that Marturano fails to teach or suggest at least this feature of independent claim 1.

The Office Action alleges that Figure 2, column 3, lines 15-17, column 3, lines 43-46, and column 4, lines 1-52 of Marturano disclose the features of independent claim 1. Marturano describes a receiver that includes a channel quality estimator 222 for outputting a

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channel quality estimate signal related to the quality of a channel. Marturano further describes that when the channel quality estimator 222 indicates that the channel quality is relatively good, a block decoder 220 attempts to correct Group 1 bit errors by using BCH decoding on an input codeword 218. Marturano still further describes that if the channel quality estimator 222 indicates that the channel quality is not sufficiently high to make successful correction likely, the block decoder 220 uses the codeword as a CRC error detecting code, and does not attempt error correction. Applicant respectfully submits that there is no teaching or suggestion in Marturano that one of the BCH decoding method or the CRC checking method uses "fewer computational resources" than the other as found in independent claim 1. In addition, Applicant respectfully submits that Marturano fails to teach or suggest that the feature of "using fewer computational resources" is even considered when choosing between the BCH decoding method and the CRC checking method.

Furthermore, even if one were to assume that one of the BCH decoding method and the CRC checking method of Marturano uses fewer computational resources than the other, Applicant respectfully submits that one would not arrive at the invention as claimed. As is known in the art, BCH codes comprise a very large group of block codes that are able to detect and correct multiple errors in data. In contrast, a CRC is only able to detect that an error has occurred in data and does not have the capability of correcting the error or errors in the data. Applicant respectfully submits that computation resource use for the BCH decoder, which is able to detect and correct errors, would be greater than that for a CRC detector, which only detects the presence of an error. In Marturano, BCH decoding is used when channel quality is high, and CRC checking is used when channel quality is not sufficiently high to make successful correction likely. In contrast to Marturano, the present invention chooses between a first detecting means and a second detecting means based on their respective use of computation resources. In the present invention, when the quality of received blocks of information bits is above a given level, detection using a detecting means using fewer computation resources is used. Applicant respectfully submits that independent claim 1 distinguishes over Marturano and requests the 35 U.S.C. 102(b) rejection of independent claim 1 be withdrawn.

Independent 6 is directed to a method of transmitting information from a first communications device to a second communications device in a radio system including

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"estimating the quality of one or more of said distorted blocks of information bits, and based thereon, determining whether to perform said first detection or, when the quality of said received blocks of information bits is above a given level, to perform a second less computation-demanding detection of information bits from said distorted information bits." For similar reasons as those discussed with respect to independent claim 1, Applicant respectfully submits that Marturano fails to teach or suggest at least this feature of independent claim 6. Applicant respectfully submits that independent claim 6 distinguishes over Marturano and requests the 35 U.S.C. 102(b) rejection of independent claim 6 be withdrawn.

Independent claim 10 is direct to a communication system including "a second detecting means adapted, when the quality of said communication link is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means." For similar reasons as those discussed with respect to independent claim 1, Applicant respectfully submits that Marturano fails to teach or suggest at least this feature of independent claim 10. Applicant respectfully submits that independent claim 10 distinguishes over Marturano and requests the 35 U.S.C. 102(b) rejection of independent claim 10 be withdrawn.

Claims 2, 7, and 11 are dependent upon an include the features of independent claims 1, 6, and 10, respectively. For at least the reasons as discussed with respect to independent claims 1, 6, and 10, Applicant respectfully submits that claims 2, 7, and 11 distinguish over Marturano and requests the 35 U.S.C. 102(b) rejection of claims 2, 7, and 11 be withdrawn.

Claims 3, 4, 5, 8, 9, 12, and 13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Marturano as applied to claims 2 and 10, and further in view of U.S. Patent No. 5,526,399 to Kameda ("Kameda"). Claims 3-5, 8-9, and 12-13 are dependent upon and include the features of their respective independent claims 1, 6, and 10. As previously discussed, Marturano fails to teach or suggest the features of independent claims 1, 6, and 10. Applicant respectfully submits that Kameda also fails to teach or suggest these features. Kameda describes a data transmission system in which a transmission rate and an error controlling mode is selected in response to a state of transmission of a radio section. Applicant respectfully submits that Kameda does not teach or suggest determining whether to use a first

detecting means or a second detecting means when detecting information bits based upon a estimated quality of the received information bits, wherein the second detecting means uses fewer computational resources than the first detecting means. Applicant respectfully submits that Kameda fails to teach or suggest the feature of independent claim 1 of "second detecting means adapted, when the quality of said received blocks of information bits is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means."

For similar reasons as those discussed with respect to independent claim 1, Applicant respectfully submits that Kameda fails to teach or suggest the feature of independent claim 6 of "estimating the quality of one or more of said distorted blocks of information bits, and based thereon, determining whether to perform said first detection or, when the quality of said received blocks of information bits is above a given level, to perform a second less computation-demanding detection of information bits from said distorted information bits." In addition, for similar reasons as those discussed with respect to independent claim 1, Applicant respectfully submits that Kameda fails to teach or suggest the feature of independent claim 10 of "a second detecting means adapted, when the quality of said communication link is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means." For at least the reasons as discussed with respect to independent claims 1, 6, and 10, Applicant respectfully submits that claims 3-5, 8-9, and 12-13 distinguish over Marturano in view of Kameda and requests the 35 U.S.C. 103(a) rejection of claims 3-5, 8-9, and 12-13 be withdrawn.

Claim 14 stands rejected under 35 U.S.C. 103(a) as being unpatentable over Marturano in combination with Kameda as applied to claims 10-13, and further in view of U.S. Patent No. 5,737,365 to Gilbert et al. ("Gilbert"). Claim 14 is dependent upon and includes the features of independent claim 10. As previously discussed, neither Marturano nor Kameda, alone or in combination, teach or suggest the features of independent claim 10. The Office Action indicates that column 4, lines 40-42 of Gilbert disclose "a method and apparatus for determining a received signal quality estimate wherein the system is a TDMA system, and said blocks of information are timeslots." Applicant respectfully submits that Gilbert fails to teach or suggest the feature of independent claim 10 of "a second detecting means adapted, when the

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quality of said communication link is above a given level, to detect information bits from said distorted information bits using fewer computation resources than said first detecting means." Applicant respectfully submits that claim 14 distinguishes over Marturano in combination with Kameda and further in view of Gilbert and requests the 35 U.S.C. 103(a) rejection of claim 14 be withdrawn.

In view of the above, each of the presently-pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: July 12, 2004   Respectfully submitted,

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